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EFFECT OF BUTTERFLY HUG METHOD ON REDUCING ANXIETY LEVELS IN DORMITORY STUDENTS IN FACING THE RISK OF COVID-19 TRANSMISSION AT SMP MTA GEMOLONG

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ABSTRACT

Covid-19 is a disease with a high transmission rate. This makes boarding students vulnerable to experiencing anxiety in facing the challenges of the high spread of Covid-19 in dormitories because activities are carried out 24 hours face-to-face. Anxiety that is not addressed immediately will negatively impact dormitories students, so appropriate education and intervention are needed. This study aims to determine the effect of the butterfly hug method on reducing anxiety levels in dormitory students in facing the risk of covid-19 transmission at SMP MTA Gemolong. This study used quasi experimental design. The sampling technique used purposive sampling technique and obtained a number of 76 participants who were divided into experimental group (n = 38) and kontrol group (n = 38). The instrument used was the Hamilton Anxiety Rating Scale (HARS). Data analysis used Wilcoxon Test and Mann Whitney Test with p value < 0.05. Data analysis using the Wilcoxon Test in the experimental group showed p value = 0,000 and in the kontrol group showed p value = 0,141. Hypothesis testing using the Mann Whitney Test in both groups obtained p value = 0,026. There is an effect of the butterfly hug method on reducing anxiety levels in dormitory students facing the risk of covid-19 transmission at SMP MTA Gemolong.

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1. INTRODUCTION

The coronavirus, or COVID-19, is a highly contagious disease with a high mortality rate. The virus began spreading to various regions in Indonesia in 2020. The spread of COVID-19 in Indonesia was extremely rapid, with a surge in cases in March 2020, reaching a total of 309 confirmed cases (Damarjati, 2020). One of the areas affected by COVID-19 is Gemolong Subdistrict, Sragen. According to the Suara Merdeka daily newspaper on March 24, 2020, Sragen Regency recorded the highest number of cases with 107 cases and was designated as a red zone (Wibowo, 2020). COVID-19 has impacted various sectors, including the education sector. One of the efforts to reduce the transmission of Covid-19 was conducted by the government through a circular letter from the Ministry of Education and Culture No. 4, 2020, regarding an appeal to schools to implement distance learning and for students to study from their respective homes or online. In September 2021, the COVID-19 situation in Sragen began to stabilize, and the Sragen region was classified as a yellow zone at level 3 for low COVID-19 cases (Diskominfo, 2021). Based on this situation, the government decided to resume in-person learning while adhering to health protocols in accordance with the Ministry of Education and Culture's circular letter No. 4 of 2021. The resumption of in-person learning has caused boarding school students to feel anxious about the risk of COVID-19 transmission.

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The World Health Organization (WHO) stated in 2017 that the number of people with mental health problems worldwide reached 792 million. Depression and anxiety are the most prevalent mental disorders, with 38.4% or 284 million of them suffering from anxiety disorders (World Health Organization, 2017). Research by Ruskandi (2021) shows that the COVID-19 pandemic has caused stress and anxiety among students related to COVID-19 transmission. The causes of anxiety among students include COVID-19 transmission, lack of information, sensationalized news coverage, and insufficient reading of literature related to preventing COVID-19 transmission Syami (2021). Anxiety that is not addressed promptly can lead to sleep deprivation, difficulty concentrating, frequent forgetfulness, increased irritability, and quick temper, which can negatively impact students' academic performance (Fitria, 2020).

One non-pharmacological method is the butterfly hug method. The author found that this method is quite easy for boarding school students to use to overcome or reduce anxiety. This has been proven in a study conducted Lazzaroni et al., (2021) on the effect of the butterfly hug method on reducing anxiety levels, showing that the butterfly hug method works to reduce anxiety in adolescents to adults aged 13 to 24 years. Overall, the butterfly hug method has a psychological impact. The butterfly hug method is a form of self-acceptance by giving oneself suggestions to feel better, reduce anxiety, restlessness, and promote a sense of relaxation Arviani et al., (2021). Mawarti (2021) explains that five-finger hypnosis therapy can reduce anxiety levels. This therapy helps change perceptions of anxiety, stress, tension, and fear by accepting suggestions at the subconscious level or in a relaxed state by moving the fingers according to instructions. Research conducted by Jarero et al., (2021) suggests that the butterfly hug method can be combined with other therapies to obtain more optimal results in reducing anxiety levels. This study aims to determine the effect of the butterfly hug method on reducing anxiety levels in dormitory students in facing the risk of COVID-19 transmission at SMP MTA Gemolong.

2. METHOD

This study used a quasi-experimental method with a one-group pretest-posttest design. The population of this study was boarding school students at SMP MTA Gemolong. The total population of this study was 207 students. The sample size of this study was 76 respondents. The total number of respondents was divided into two groups. The experimental group consisted of 38 respondents and the control group consisted of 38 respondents. The sampling technique used was purposive sampling with the following criteria: students attending SMP MTA Gemolong, students residing in the SMP MTA Gemolong dormitory, male and female students, students aged 14-15 years, willing to be respondents, and signing the research consent form (informed consent). In a one-group pretest-posttest design with a control group, the researcher used one group as the experimental group and another group as the control group, beginning with a pretest, followed by an intervention. The experimental group received the butterfly hug method intervention, while the control group received the five-finger hypnosis therapy intervention. The study concluded with a posttest for both groups. The experimental group received 8 intervention sessions over 2 weeks, 4 times a week, lasting approximately 30 minutes per session. In the control group, the intervention was administered over 2 weeks, with 4 sessions per week, each lasting approximately 15 minutes. Each session was conducted with a one-day interval between sessions. The intervention process for sessions 1, 6, 7, and 8 was monitored by the researcher, while sessions 2 to 5 were monitored with the help of the dormitory caretaker. The intervention for the experimental and control groups was given together, but was conducted at separate places and times for male and female respondents. Male respondents were in the boys' dormitory mosque and female respondents were in the girls' dormitory mosque. The questionnaire to measure anxiety levels used the Hamilton Anxiety Rating Scale (HARS). The validity test was conducted by researchers in December 2021 with 38 respondents who were 9th grade boarding school students at SMP MTA Gemolong using the HARS (Hamilton Anxiety Rating Scale) questionnaire. Validity testing was conducted using SPSS 25.00 for Windows. Based on the validity test results, a significance value of 0.00 was obtained, indicating that the significance value was less than 0.05, thus the questionnaire for anxiety levels was declared valid. The reliability test was conducted using the SPSS 25.00 for Windows program. Based on the reliability test results, a Cronbach's alpha value of 0.931 was obtained, indicating that the HARS questionnaire was reliable. Data analysis used the Wilcoxon Test and Mann Whitney Test.

3. RESULT

Table 1 Characteristics based on gender (n=76)

Gender	f	%	Mean Anxiety Level
Male	37	48,7%	2,92
Woman	39	51,2%	2,72

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Table 2 Characteristics based on age (n=76)

Age	f	%	Mean Anxiety Level
14 years	40	52,6%	2,85
15 years	36	47,4%	2,78

Table 3 Frequency Distribution of Respondents' Anxiety Levels Before Treatment in the Experimental Group (n = 38)

Anxiety Level	f	%
No anxiety	4	10,5
Mild anxiety	11	28,9
Moderate anxiety	14	36,8
Severe anxiety	8	21,1
Panic	1	2,6
Total	38	100.0

Table 4 Frequency Distribution of Respondents' Anxiety Levels Before Treatment in the Control Group (n = 38)

Anxiety Level	f	%
No anxiety	5	13,2
Mild anxiety	10	26,3
Moderate anxiety	10	26,3
Severe anxiety	11	28,9
Panic	2	5,3
Total	38	100.0

Table 5 Frequency Distribution of Respondents' Anxiety Levels After Treatment in the Experimental Group (n = 38)

Anxiety Level	f	%
No anxiety	18	47,4
Mild anxiety	8	21,1
Moderate anxiety	6	15,8
Severe anxiety	5	13,2
Panic	1	2,6
Total	38	100.0

Table 6 Frequency Distribution of Respondents' Anxiety Levels After Treatment in the Control Group (n = 38)

Anxiety Level	f	%
No anxiety	9	23,7
Mild anxiety	9	23,7
Moderate anxiety	9	23,7
Severe anxiety	8	21,1
Panic	3	7,9
Total	38	100.0

Table 7 Homogeneity Test Results (n = 78)

	Levene Statistic	df 1	df 2	Sig.
Pre Test	1.001	1	74	0,320
Post Test	0.584	1	74	0,447

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Table 8 Results of Normality Test in the Experimental Group (n=38)

	Mean	SD	Median (Min-Max)	Sig.
Pre Test	2,76	0,998	3 (1-5)	0,005
Post Test	2,03	1,197	3 (1-5)	0,000

Table 9 Results of Normality Test in Control Group (n=38)

	Mean	SD	Median (Min-Max)	Sig.
Pre Test	2,87	1,143	3 (1-5)	0,005
Post Test	2,66	1,279	3 (1-5)	0,000

Table 10 Results of the Wilcoxon Test for the Experimental Group (n = 38)

	Mean	SD	Median (Min-Max)	95% CI	*p Value*
Pre Test	2,76	0,998	3 (1-5)	2,44-3,09	0,000
Post Test	2,03	1,197	3 (1-5)	1,63-2,42	

Table 11 Results of the Wilcoxon Test for Control Group (n = 38)

	Mean	SD	Median (Min-Max)	95% CI	*p Value*
Pre Test	2,87	1,143	3 (1-5)	2,49-3,24	0,141
Post Test	2,66	1,279	3 (1-5)	2,24-3,08	

Table 12 Results of Normality Test in the Experimental Group and Control Group (n = 78)

Group	Mean	SD	Median (Min-Max)	Sig.
Experiment	2,03	1,197	3 (1-5)	0,000
Control	2,66	1,279	3 (1-5)	0,003

Table 13 Mann Whitney Test Results for the Experimental Group and Control Group (n = 78)

Group	Mean	SD	Median (Min-Max)	95% CI	*p Value*
Experiment	2,03	1,197	3 (1-5)	1,63-2,42	0,026
Control	2,66	1,279	3 (1-5)	2,24-3,08	

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4. DISCUSSION

Respondent characteristics based on gender

Table 1 shows that the respondents consisted of males and females, with a higher average anxiety level among females (2.92). The higher anxiety levels in women are due to women tending to have higher emotional responses when facing or witnessing an event or experience. According to Akmalia & Ulfah (2021), women have higher anxiety levels than men, experience difficulty in solving problems, think less logically, lack self-confidence, and have high emotionality. The results of a study conducted by Natalya (2020) revealed that the anxiety often experienced by women is due to the coping response of individual experiences regarding the inability to deal with problems or feelings of security and comfort. Stuart (2005) in Fahrianti & Nurmina (2021) explains that both men and women can experience anxiety, but what distinguishes them is the way they cope with the problems they face, or what is called coping strategies, which differ between men and women.

Respondent characteristics based on age

Table 2 shows respondents aged 14–15 years with the highest average anxiety level at age 14 (2.85). The respondents in this study were boarding school students at SMP MTA Gemolong aged 14–15 years with a higher average anxiety level at age 14. This is because older respondents may have more adaptive coping strategies in responding to anxiety. Research conducted by Monica & Supriyadi (2022) explains that the level of coping strategies increases with age because as individuals get older, they have more experience in dealing with various issues. Adolescence is a transition from childhood to adulthood. During this period, adolescents explore and develop themselves. According to Pasongli & Malinti (2021) as age increases, anxiety levels will decrease because mental and spiritual readiness is achieved. In addition, anxiety is more often experienced at a young age due to a lack of knowledge and experience that makes individuals more prepared to face things.

Anxiety before intervention

Table 3 shows that the anxiety levels of respondents in the experimental group before treatment ranged from no anxiety to panic, with the largest proportion at moderate anxiety (36.8%), and table 4 shows that the anxiety levels of respondents in the control group before treatment ranged from no anxiety to panic, with mild anxiety and moderate anxiety at the largest proportions (26.3%).

Before being given treatment in the form of the butterfly hug method combined with five-finger hypnosis therapy, the anxiety levels of respondents in the experimental group ranged from no anxiety to panic. The largest proportion was in the moderate anxiety level. The high anxiety levels of the respondents were due to the fact that the respondent group was in a situation with a high risk of Covid-19 transmission. The results of this study are in line with Lazzaroni et al., (2021) where the anxiety level ranged from mild to panic before being given the butterfly hug method treatment. According to Dani & Mediantara (2020) adolescence is a stage of life that is still unstable in dealing with unexpected conditions, and adolescents' emotions are easily shaken, such as excessive anxiety about the fear of contracting the Covid-19 virus.

Anxiety after intervention

Table 5 shows that the anxiety levels of respondents after treatment in the experimental group ranged from no anxiety to panic, with the largest proportion at no anxiety (47.4%), and table 6 shows that the anxiety levels of respondents after treatment in the control group ranged from no anxiety to panic, with the largest proportion of anxiety levels in the range of no anxiety, mild anxiety, and moderate anxiety (23.7%).

After being given treatment in the form of the butterfly hug method combined with five-finger hypnosis, the average anxiety level decreased. Respondents who experienced severe, moderate, and mild anxiety levels decreased to no anxiety, mild anxiety, and moderate anxiety, but those with panic anxiety levels did not experience a decrease in anxiety levels. The largest proportion was in the no anxiety level. The results of this study are in line with research conducted by Lazzaroni et al., (2021) that at moderate and mild anxiety levels, there was a decrease in anxiety levels after being given the butterfly hug method treatment. Research conducted by Jarero et al., (2021) explains that the butterfly hug method is effective for reducing anxiety levels in the mild to moderate range, but the butterfly hug method is not proven to be effective in reducing panic anxiety levels because the butterfly hug method is first aid for anxiety.

Bivariate Analysis

Table 7 shows that the variants in both groups are homogeneous or the same. This is proven by the significance value in the pre-test of 0.320 > 0.05 and the significance value in the post-test of 0.447 > 0.05. After that, a 2-sample paired difference test was conducted. This test was conducted to determine the difference in anxiety levels before and after treatment in the experimental group and the control group. Before the analysis was conducted, a normality test was performed on each group. In Table 8 and Table 9, the results of the normality test of the pre-test and post-test data in the experimental group and control group showed that the data were not normally distributed, because the significance value was < 0.05, so the paired sample difference test used the Wilcoxon test.

Table 10 shows the results of the Wilcoxon test in the experimental group before and after treatment, there was an average decrease of 0.73 with a p-value of 0.000. In the experimental group, there was a significant change in anxiety levels because the p-value was < 0.05. Table 11 shows the results of the Wilcoxon test in the control group before and after treatment, showing an average decrease of 0.21 with a p-value of 0.141. In the control group, there was no significant change in anxiety levels because the p-value was > 0.05.

Next, an unpaired two-sample test was conducted. This test was used to determine the difference in anxiety levels between the experimental group and the control group through the difference in the mean of each group. Before the analysis was conducted, a normality test was necessary. In the table 12, the results of the normality test for the data in the experimental group and the control group show that the data are not normally distributed, as the significance value is < 0.05. Therefore, the two-sample independent t-test uses the Mann-Whitney test. Table 13 shows an increase in the mean of both groups by 0.63. The p-value is 0.026 < 0.05, indicating a significant difference between the experimental group and the control group. The statistical analysis yields a p-value of 0.026, so p-value < α, leading to the rejection of H0 and acceptance of Ha.

Before and after treatment was given to the experimental group, there was a significant effect on the reduction in anxiety levels, while in the control group there was no significant difference in the reduction of anxiety. The results of the analysis of the experimental and control groups showed a significant difference between the two groups, so that the results showed that the butterfly hug method had an effect on reducing anxiety levels. This difference is possible because the experimental group was able to manage the anxiety response that arose by combining the butterfly hug method with five-finger hypnosis therapy. Meanwhile, the control group only received five-finger hypnosis therapy to manage their anxiety responses. This is in line with research conducted by Girianto et al., (2021) which states that the butterfly hug method can reduce anxiety levels.

The results of the study showed that there was no significant reduction in anxiety in the control group. From the observation results, when given the five-finger hypnosis therapy intervention, there was a sentence that said, "Imagine the person you love is beside you." The respondents responded with tears and anxiety because they felt a deep longing for their parents whom they had not seen for a long time. This is supported by research conducted by Fasoro et al., (2019) which explains that anxiety caused by feelings of longing arises when someone who is accustomed to receiving direct support from their family feels a sense of loss because their family cannot be together and provide direct support. The combination of the butterfly hug method and five-finger hypnosis therapy has been shown to provide a sense of comfort and calm, thereby reducing anxiety levels.

5. CONCLUSION

The Wilcoxon Test in the experimental group showed p value = 0,000 and in the kontrol group showed p value = 0,141. Hypothesis testing using the Mann Whitney Test in both groups obtained p value = 0,026. There is an effect of the butterfly hug method on reducing anxiety levels in dormitory students facing the risk of covid-19 transmission at SMP MTA Gemolong.

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